



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,008	12/30/2003	Luc Van Brabant	10830.0103NP	6494
27927	7590	04/19/2007	EXAMINER	
RICHARD AUCHTERLONIE NOVAK DRUCE & QUIGG, LLP 1000 LOUISIANA 53RD FLOOR HOUSTON, TX 77002			WANG, HARRIS C	
		ART UNIT		PAPER NUMBER
				2139
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	04/19/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/748,008	VAN BRABANT, LUC
	<b>Examiner</b>	<b>Art Unit</b>
	Harris C. Wang	2139

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 December 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-28 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 December 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. Claims 1-28 are pending

### ***Claim Rejections - 35 USC § 112***

2.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In Claim 6, the phrase "grouping the on-demand anti-virus scan requests into chunks of multiple ones of the on-demand anti-virus scan requests" is unclear. The phrase can be interpreted as grouping the individual scan requests or grouping using chunks of multiple ones. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards (7188367) in view of Novell's article: AntiVirus Solutions for Network.

Regarding Claims 1-3,

Edwards teaches a method of operating a plurality of virus checkers, the method comprising:

Distributing anti-virus scan requests from the virus scan request queue to the virus checkers. (*The scan requests are placed on the priority queue as they are received; the scanner threads can then select a suitable scan request from the priority queue based on the scan request's characteristics and the current state of the other scanner threads in the pool!*  
*Column 3, lines 19-23*)

Although Edwards does teach both on-demand and on-access virus scan requests (*Virus scanners may be invoked on-demand by a computer user to scan a selected file. More typically, virus scanners install themselves as part of an operating system and then scan files, according to user preferences, as the files are created and accessed. This type of virus scanner is referred to as an on-access virus scanner* Column 1, lines 43-48), Edwards does not explicitly teach wherein the scan request queue has on-demand anti-virus scanning concurrent with on-access anti-virus scanning.

Novell teaches that "Command Anti-Virus with F-PROT Professional 4.52 for NetWare offers analysis, which includes both an on-access scanner and an on-demand scanner to search for polymorph addition, you can configure multiple concurrent scans (pg. 1)"

It would have been obvious to one of ordinary skill in the art to combine the virus scan queue of Edwards to include concurrent on-access and on-demand scanners.

The motivation to combine is that it is well known in the virus scanning art to have both on-demand and on-access scanners running concurrently. Novell provides an example of such a system.

The Examiner interprets the "user to scan a selected file" from the Edwards reference as a system administrator requesting a scan of files.

Regarding Claim 4,

Edwards and Novell teach the method as claimed in claim 1, wherein a pool of threads distribute the on-demand anti-virus scan requests and the on-access anti-virus scan requests from the virus scan request queue to the virus checkers, each anti-virus scan request on the virus scan request queue being serviced by a respective one of the threads in the pool of threads. ("The scanner thread determines whether the object of the

*intercepted event...needs scanning and, if so, scans the object. Multiple scanner threads are typically provided in pools that are capable of executing concurrently". Column 2, lines 18-24)*

Regarding Claims 5-7,

Edwards and Novell teach the method as claimed in claim 1, wherein certain scan requests are given priority based on certain characteristics by not inhibiting a first kind of scan requests while inhibiting the placement of a second kind of scan requests based on a second group of characteristics when the number of anti-virus scan requests on the virus scan request queue reaches a threshold. (*"a pending scan request from user A may be determined to be more suitable than a pending scan request from user B if three of the four scanner threads are already scanning scan requests from user B. This prevents a single user B from monopolizing the virus scanner (Column 5, lines 66-67, Column 6, lines 1-3)."*)

Edwards also teaches grouping individual scan requests into chunks based on characteristics, and placing the chunks onto the virus scan request queue. Edwards further teaches scanning one type of grouped scans until completion before scanning a second type (*"the scan request is placed on the priority queue in...some other pre-defined fixed order, e.g. executable files first and data files second" Column 7, lines 33-34, Edwards.*). The Examiner interprets the fixed order as inherently requiring grouping different scan characteristics into groups or chunks.

However Edwards does not explicitly teach that on-access scan requests are given priority over the on-demand anti-virus scan requests by inhibiting placing on-demand scan requests into the scan request queue.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Edwards to include the type of virus scan (on-access or on-demand) as "certain additional characteristics about scan requests."

The motivation is the different types of scans are an important characteristic of scans, and as both on-access and on-demand virus scans each have their own benefits, it would be useful to prioritize based on their type.

Edwards does not explicitly teach that the scan requests would be grouped into chunks are on-demand scan requests.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Edwards to group on-demand scan requests into chunks.

The motivation is that Edwards already groups scan requests into chunks based on certain characteristics and the type of virus scan (on-demand or on-access) is a characteristic of a virus scan.

Art Unit: 2139

The Examiner interprets the original claim language "grouping the on-demand anti-virus scan requests into chunks of multiple ones of the on-demand anti-virus scan requests" as just "grouping individual on-demand requests into chunks."

The Examiner further interprets inhibiting the placement of at least one of the chunks onto the virus scan request queue until completion of anti-virus scanning for the anti-virus scan requests in a prior one of the chunks as scanning one type of grouped scans until completion before scanning a second type:

Regarding Claims 8-11,

Edwards teaches a method of operating a plurality of virus checkers, the method comprising:

Distributing anti-virus scan requests from the virus scan request queue to the virus checkers. (*"The scan requests are placed on the priority queue as they are received; the scanner threads can then select a suitable scan request from the priority queue based on the scan request's characteristics and the current state of the other scanner threads in the pool"*  
*Column 3, lines 19-23*)

Edwards also teaches grouping individual scan requests into chunks, and placing the chunks onto the virus scan request queue. Edwards further teaches scanning one type of grouped scans until completion before scanning a second type (*"the scan*

Art Unit: 2139

*request is placed on the priority queue in...some other pre-defined fixed order, e.g. executable files first and data files second" Column 7, lines 33-34, Edwards).* The Examiner interprets the fixed order as inherently requiring grouping different scan characteristics into groups or chunks.

Although Edwards does teach both on-demand and on-access virus scan requests ("Virus scanners may be invoked on-demand by a computer user to scan a selected file. More typically, virus scanners install themselves as part of an operating system and then scan files, according to user preferences, as the files are created and accessed. This type of virus scanner is referred to as an on-access virus scanner" Column 1, lines 43-48), Edwards does not explicitly teach wherein the scan request queue has on-demand anti-virus scanning concurrent with on-access anti-virus scanning.

Novell teaches that "Command Anti-Virus with F-PROT Professional 4.52 for NetWare offers analysis, which includes both an on-access scanner and an on-demand scanner to search for polymorph addition, you can configure multiple concurrent scans (pg. 1)"

It would have been obvious to one of ordinary skill in the art to combine the virus scan queue of Edwards to include concurrent on-access and on-demand scanners.

The motivation to combine is that it is well known in the virus scanning art to have both on-demand and on-access scanners running concurrently. Novell provides an example of such a system.

The Examiner interprets the "user to scan a selected file" from the Edwards reference as a system administrator requesting a scan of files.

Edwards does not explicitly teach that the scan requests would be grouped into chunks are on-demand scan requests.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Edwards to group on-demand scan requests into chunks.

The motivation is that Edwards already groups scan requests into chunks based on certain characteristics and the type of virus scan (on-demand or on-access) is a characteristic of a virus scan.

Regarding Claims 12-15,

Edwards teaches a method of operating a plurality of virus checkers, the method comprising:

A pool of threads distribute the on-demand anti-virus scan requests and the on-access anti-virus scan requests from the virus scan request queue to the virus checkers, each anti-virus scan request on the virus scan request queue being serviced by a respective one of the threads in the pool of threads. (*"The scanner thread determines whether the object of the intercepted event...needs scanning and, if so, scans the object. Multiple scanner threads are typically provided in pools that are capable of executing concurrently"* Column 2, lines 18-24)

Distributing anti-virus scan requests from the virus scan request queue to the virus checkers. (*The scan requests are placed on the priority queue as they are received; the scanner threads can then select a suitable scan request from the priority queue based on the scan request's characteristics and the current state of the other scanner threads in the pool*" Column 3, lines 19-23)

Edwards also teaches grouping individual scan requests into chunks, and placing the chunks onto the virus scan request queue. Edwards further teaches scanning one type of grouped scans until completion before scanning a second type (*the scan request is placed on the priority queue in...some other pre-defined fixed order, e.g. executable files first and data files second*" Column 7, lines 33-34, Edwards). The Examiner interprets the fixed order as inherently requiring grouping different scan characteristics into groups or chunks.

Although Edwards does teach both on-demand and on-access virus scan requests (*Virus scanners may be invoked on-demand by a computer user to scan a selected file. More typically, virus scanners install themselves as part of an operating system and then scan files, according to user preferences, as the files are created and accessed. This type of virus scanner is referred to as an on-access virus scanner*" Column 1, lines 43-48), Edwards does not explicitly teach wherein the scan request queue has on-demand anti-virus scanning concurrent with on-access anti-virus scanning.

Novell teaches that "*Command Anti-Virus with F-PROT Professional 4.52 for NetWare offers analysis, which includes both an on-access scanner and an on-demand scanner to search for polymorph addition, you can configure multiple concurrent scans (pg. 1)*"

It would have been obvious to one of ordinary skill in the art to combine the virus scan queue of Edwards to include concurrent on-access and on-demand scanners.

The motivation to combine is that it is well known in the virus scanning art to have both on-demand and on-access scanners running concurrently. Novell provides an example of such a system.

The Examiner interprets the "user to scan a selected file" from the Edwards reference as a system administrator requesting a scan of files.

Edwards does not explicitly teach that the scan requests would be grouped into chunks are on-demand scan requests.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Edwards to group on-demand scan requests into chunks.

The motivation is that Edwards already groups scan requests into chunks based on certain characteristics and the type of virus scan (on-demand or on-access) is a characteristic of a virus scan.

The Examiner interprets the original claim language "grouping the on-demand anti-virus scan requests into chunks of multiple ones of the on-demand anti-virus scan requests" as just "grouping individual on-demand requests into chunks."

The Examiner further interprets inhibiting the placement of at least one of the chunks onto the virus scan request queue until completion of anti-virus scanning for the anti-virus scan requests in a prior one of the chunks as scanning one type of grouped scans until completion before scanning a second type.

Regarding Claim 16, 18-19

Edwards teaches a virus checking system comprising:

*A plurality of virus checkers ("Virus scanners may be invoked on-demand by a computer user to scan a selected file. More typically, virus scanners install themselves as part of an operating system and then scan files, according to user preferences, as the files are created and accessed. This type of virus scanner is referred to as an on-access virus scanner"*  
*Column 1, lines 43-48),*

A virus scan request queue (*Fig. 2, Priority Queue*);

*A processor ("An exemplary system for implementing the invention includes...a processor (or processing unit)" Column 8, lines 37-45) coupled to the virus checkers and the virus scan request queue for sending virus scan requests from the virus scan request queue to the virus checkers ("prioritize the scan requests by placing them in the priority queue" Column 5, lines 40-42) ;*

Distributing anti-virus scan requests from the virus scan request queue to the virus checkers. (*The scan requests are placed on the priority queue as they are received; the scanner threads can then select a suitable scan request from the priority queue based on the scan request's characteristics and the current state of the other scanner threads in the pool*)

*(Column 3, lines 19-23)*

Although Edwards does teach both on-demand and on-access virus scan requests (*Virus scanners may be invoked on-demand by a computer user to scan a selected file. More typically, virus scanners install themselves as part of an operating system and then scan files, according to user preferences, as the files are created and accessed. This type of virus scanner is referred to as an on-access virus scanner*) *(Column 1, lines 43-48)*, Edwards does not explicitly teach wherein the scan request queue has on-demand anti-virus scanning concurrent with on-access anti-virus scanning.

Novell teaches that *"Command Anti-Virus with F-PROT Professional 4.52 for NetWare offers analysis, which includes both an on-access scanner and an on-demand scanner to search for polymorph addition, you can configure multiple concurrent scans (pg. 1)"*

It would have been obvious to one of ordinary skill in the art to combine the virus scan queue of Edwards to include concurrent on-access and on-demand scanners and then to distribute these scan requests to the virus checkers.

Art Unit: 2139

The motivation to combine is that it is well known in the virus scanning art to have both on-demand and on-access scanners running concurrently. Novell provides an example of such a system.

The Examiner interprets the "user to scan a selected file" from the Edwards reference as a system administrator requesting a scan of files.

Regarding Claim 17,

Edwards and Novell teach the virus checking system as claimed in claim 16, wherein said at least one processor and said virus scan request queue are in a file server, and the virus checkers are separate from the file server. (*"pre-processor threads obtain certain additional characteristics about the scan requests...In a client/server environment, the characteristics may further include whether the object is being accessed form the server console or from a network client"* Column 5, lines 25-38)

Because the pre-processor threads are in between the server and the processor, the Examiner interprets the virus checkers as being separate from the file server.

Regarding Claim 20,

Edwards and Novell teach the virus checking system as claimed in claim 16, wherein said at least one processor is programmed to execute multiple threads for

distributing the on-demand anti-virus scan requests and the on-access anti-virus scan requests from the virus scan request queue to the virus checkers, each anti-virus scan request on the virus scan request queue being serviced by a respective one of the threads in the pool of threads.

(*"The scanner thread determines whether the object of the intercepted event...needs scanning and, if so, scans the object. Multiple scanner threads are typically provided in pools that are capable of executing concurrently"* Column 2, lines 18-24)

Regarding Claim 21,

Edwards and Novell teach the virus checking system as claimed in claim 16. Edwards teaches certain scan requests are given priority based on certain characteristics by not inhibiting a first kind of scan requests while inhibiting the placement of a second kind of scan requests based on a second group of characteristics when the number of anti-virus scan requests on the virus scan request queue reaches a threshold. (*"a pending scan request from user A may be determined to be more suitable than a pending scan request from user B if three of the four scanner threads are already scanning scan requests from user B. This prevents a single user B from monopolizing the virus scanner"* (Column 5, lines 66-67, Column 6, lines 1-3).")

However Edwards does not explicitly teach that on-access scan requests are given priority over the on-demand anti-virus scan requests by inhibiting placing on-demand scan requests into the scan request queue.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Edwards to include prioritizing based on the type of virus scan (on-access or on-demand) instead of based on User type.

The motivation is the different types of scans are an important characteristic of scans, and as both on-access and on-demand virus scans each have their own benefits, it would be useful to prioritize based on their type.

Regarding Claims 22 and 23,

Edwards and Novell teach a virus checking system as claimed in claim 16. Edwards also teaches grouping individual scan requests into chunks, and placing the chunks onto the virus scan request queue. Edwards further teaches scanning one type of grouped scans until completion before scanning a second type (*"the scan request is placed on the priority queue in...some other pre-defined fixed order, e.g. executable files first and data files second"* Column 7, lines 33-34, Edwards). The Examiner interprets the fixed order as inherently requiring grouping different scan characteristics into groups or chunks.

Edwards does not explicitly teach that the scan requests would be grouped into chunks are on-demand scan requests.

Art Unit: 2139

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Edwards to group on-demand scan requests into chunks.

The motivation is that Edwards already groups scan requests into chunks based on certain characteristics and the type of virus scan (on-demand or on-access) is a characteristic of a virus scan.

The Examiner interprets the original claim language "grouping the on-demand anti-virus scan requests into chunks of multiple ones of the on-demand anti-virus scan requests" as just "grouping individual on-demand requests into chunks."

The Examiner further interprets inhibiting the placement of at least one of the chunks onto the virus scan request queue until completion of anti-virus scanning for the anti-virus scan requests in a prior one of the chunks as scanning one type of grouped scans until completion before scanning a second type.

#### Regarding Claims 24-26

Edwards teaches a virus checking system comprising:

*A plurality of virus checkers ("Virus scanners may be invoked on-demand by a computer user to scan a selected file. More typically, virus scanners install themselves as part of an operating system and then scan files, according to user preferences, as the files are created and accessed. This type of virus scanner is referred to as an on-access virus scanner")*  
*Column 1, lines 43-48),*

Art Unit: 2139

a file server coupled to the virus checkers for sending virus scan requests to the virus checkers, ("pre-processor threads obtain certain additional characteristics about the scan requests...In a client/server environment, the characteristics may further include whether the object is being accessed from the server console or from a network client" Column 5, lines 25-38)

A virus scan request queue (Fig. 2, Priority Queue);

The file server is capable of distributing anti-virus scan requests from the virus scan request queue to the virus checkers. ("The scan requests are placed on the priority queue as they are received; the scanner threads can then select a suitable scan request from the priority queue based on the scan request's characteristics and the current state of the other scanner threads in the pool" Column 3, lines 19-23)

each anti-virus scan request on the virus scan request queue being serviced by a respective one of the threads in the pool of threads, ("The scanner thread determines whether the object of the intercepted event...needs scanning and ,if so, scans the object. Multiple scanner threads are typically provided in pools that are capable of executing concurrently" Column 2, lines 18-24)

Edwards also teaches grouping individual scan requests into chunks, and placing the chunks onto the virus scan request queue. Edwards further teaches scanning one type of grouped scans until completion before scanning a second type ("the scan request is placed on the priority queue in...some other pre-defined fixed order, e.g. executable files first and data files second" Column 7, lines 33-34, Edwards). The Examiner interprets the fixed order as inherently requiring grouping different scan characteristics into groups or chunks.

Although Edwards does teach both on-demand and on-access virus scan requests ("Virus scanners may be invoked on-demand by a computer user to scan a selected file. More typically, virus scanners install themselves as part of an operating system and then scan files, according to user preferences, as the files are created and accessed. This type of virus scanner is referred to as an on-access virus scanner" Column 1, lines 43-48), Edwards does not explicitly teach wherein the scan request queue has on-demand anti-virus scanning concurrent with on-access anti-virus scanning.

Novell teaches that "Command Anti-Virus with F-PROT Professional 4.52 for NetWare offers analysis, which includes both an on-access scanner and an on-demand scanner to search for polymorph addition, you can configure multiple concurrent scans (pg. 1)"

It would have been obvious to one of ordinary skill in the art to combine the virus scan queue of Edwards to include concurrent on-access and on-demand scanners.

The motivation to combine is that it is well known in the virus scanning art to have both on-demand and on-access scanners running concurrently. Novell provides an example of such a system.

The Examiner interprets the "user to scan a selected file" from the Edwards reference as a system administrator requesting a scan of files.

Art Unit: 2139

Edwards does not explicitly teach that the scan requests would be grouped into chunks are on-demand scan requests.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Edwards to group on-demand scan requests into chunks.

The motivation is that Edwards already groups scan requests into chunks based on certain characteristics and the type of virus scan (on-demand or on-access) is a characteristic of a virus scan.

The Examiner interprets the original claim language "grouping the on-demand anti-virus scan requests into chunks of multiple ones of the on-demand anti-virus scan requests" as just "grouping individual on-demand requests into chunks."

The Examiner further interprets inhibiting the placement of at least one of the chunks onto the virus scan request queue until completion of anti-virus scanning for the anti-virus scan requests in a prior one of the chunks as scanning one type of grouped scans until completion before scanning a second type.

Regarding Claims 27 and 28,

Edwards teaches the virus checking system as claimed in claim 24/ Edwards discloses changing the priority of certain scans when a threshold is reached and allowing others when the same threshold is reached. Edwards writes "*a pending scan*

Art Unit: 2139

*request from user A may be determined to be more suitable than a pending scan request from user B if three of the four scanner threads are already scanning scan requests from user B. This prevents a single user B from monopolizing the virus scanner (Column 5, lines 66-67, Column 6, lines 1-3)."*

Edwards also teaches grouping individual scan requests into chunks, and placing the chunks onto the virus scan request queue. Edwards further teaches scanning one type of grouped scans until completion before scanning a second type ("the scan request is placed on the priority queue in...some other pre-defined fixed order, e.g. executable files first and data files second" Column 7, lines 33-34, Edwards). The Examiner interprets the fixed order as inherently requiring grouping different scan characteristics into groups or chunks.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harris C. Wang whose telephone number is 5712701462. The examiner can normally be reached on M-F 8-5:30, Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AYAZ R. SHEIKH can be reached on (571)272-3795. The fax phone

Art Unit: 2139

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HCW

Tajhi J. Hirani  
Principal Examiner  
04/10/2011  
4/13/07